

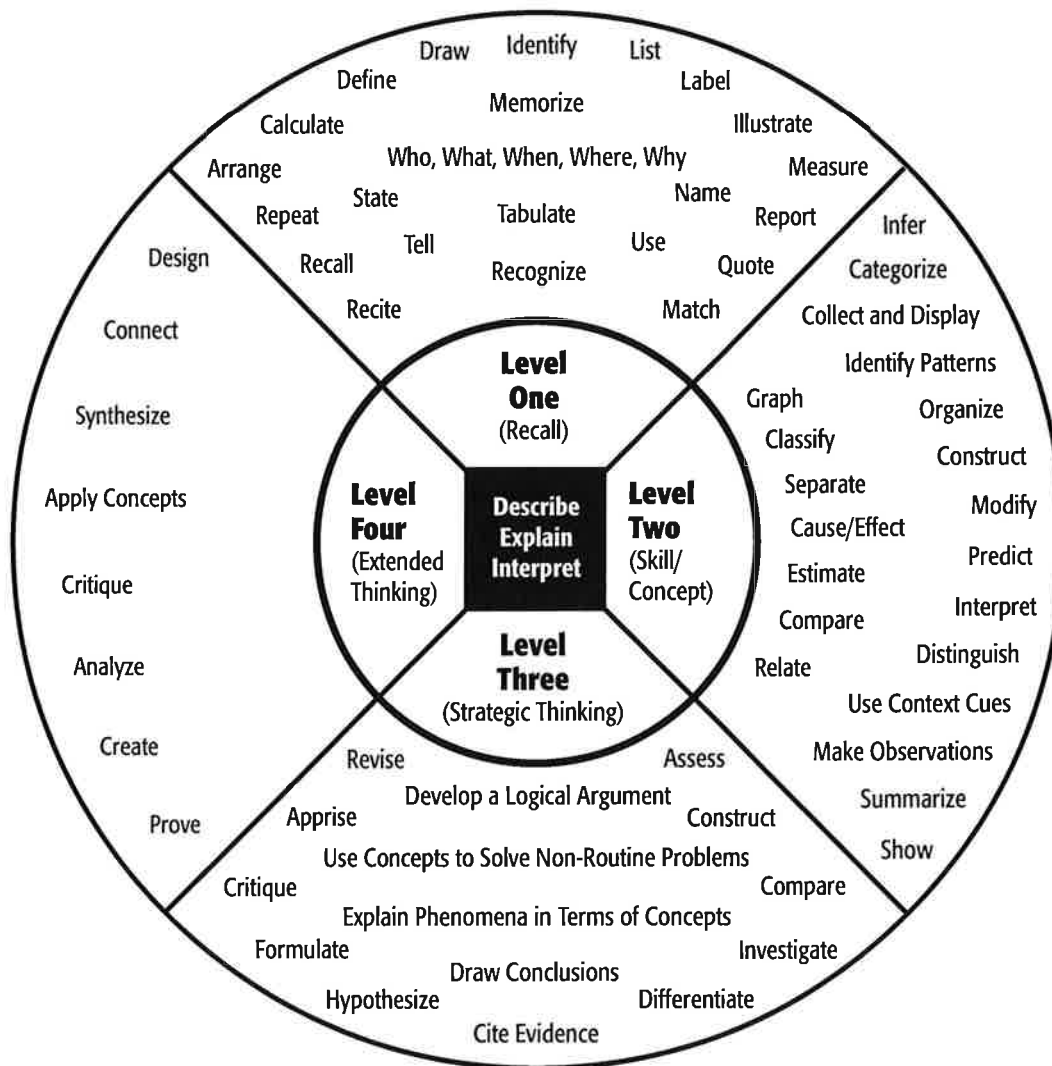
Can you...



TAXONOMY OF THINKING			
Category	Definition	Trigger Words	Products
SYNTHESIS	Re-form individual parts to make a new whole	Compose, Design, Invent, Create, Hypothesize, Construct, Forecast, Rearrange parts, Imagine	Lesson Plan, Song, Poem, Story, Ad, Invention
EVALUATION	Judge value of something vis-à-vis criteria Support judgment	Judge, Evaluate, Give opinion, Viewpoint, Prioritize, Recommend, Critique	Decision, Rating/Grades, Editorial, Debate, Critique, Defense/Verdict
ANALYSIS	Understand how parts relate to a whole Understand structure and motive Note fallacies	Investigate, Classify, Categorize, Compare, Contrast, Solve	Survey, Questionnaire, Plan, Solution, Report, Prospectus
APPLICATION	Transfer knowledge learned in one situation to another	Demonstrate, Use guides, maps, charts, etc., Build, Cook	Recipe, Model, Artwork, Demonstration, Crafts
COMPREHENSION	Demonstrate basic understanding of concepts and curriculum Translate to other words	Restate, Give examples, Explain, Summarize, Translate, Show symbols, Edit	Drawing, Diagram, Response to question, Revision
KNOWLEDGE	Ability to remember something previously learned	Tell, Recite, List, Memorize, Remember, Define, Locate	Workbook pages, Quiz, Test, Exam, Vocabulary, Facts in isolation

Adapted from Bloom's Taxonomy by Susan Winebrenner for TEACHING GIFTED KIDS IN THE REGULAR CLASSROOM, Free Spirit Publishing Inc. This page may be photocopied.

Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.	Identify and summarize the major events in a narrative.	Support ideas with details and examples.	Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/solutions.
Conduct basic mathematical calculations.	Use context cues to identify the meaning of unfamiliar words.	Use voice appropriate to the purpose and audience.	Apply mathematical model to illuminate a problem or situation.
Label locations on a map.	Solve routine multiple-step problems.	Identify research questions and design investigations for a scientific problem.	Analyze and synthesize information from multiple sources.
Represent in words or diagrams a scientific concept or relationship.	Describe the cause/effect of a particular event.	Develop a scientific model for a complex situation.	Describe and illustrate how common themes are found across texts from different cultures.
Perform routine procedures like measuring length or using punctuation marks correctly.	Identify patterns in events or behavior.	Determine the author's purpose and describe how it affects the interpretation of a reading selection.	Design a mathematical model to inform and solve a practical or abstract situation.
Describe the features of a place or people.	Formulate a routine problem given data and conditions.	Apply a concept in other contexts.	
	Organize, represent and interpret data.		

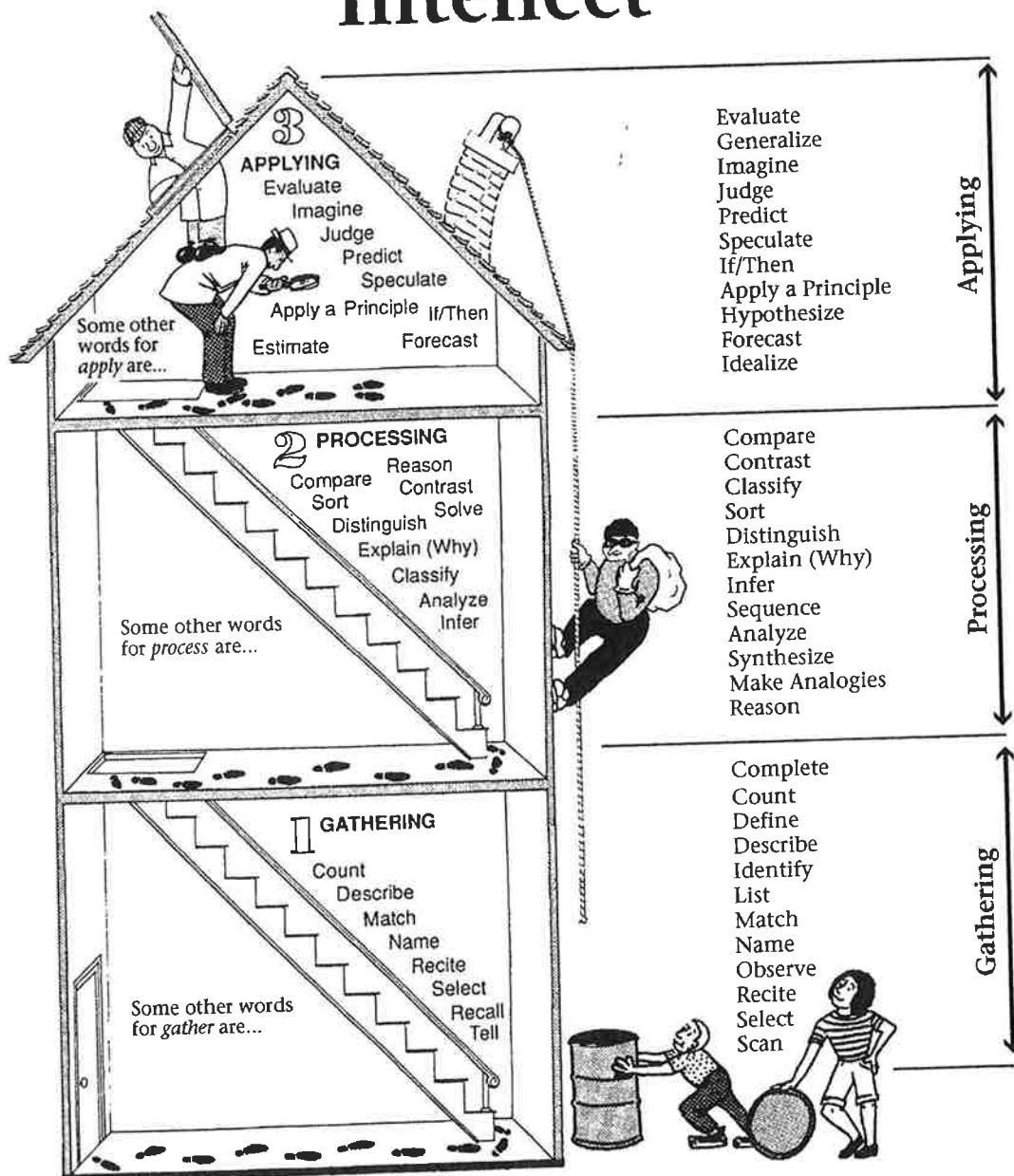
Comparative Descriptors

Never None Poor Ineffective Nothing Lacks Inappropriately Very little Absent Rarely Flat	Sometimes Occasionally Part Some Partially Minimal Incomplete Basic Flawed Limited Little Barely Inconsistently Attempted Few Vague Confusing Superficial Uneven Inadequate	Usually Frequently Most Often Fine Very Good Appropriately Thorough Clear Considerable Essential Many Sufficiently Adequately Competently Proficiently Workable Acceptable Satisfactory	All Always Great Completely Effective Consistently Outstanding Exceptional Extremely Flawless Full Achieved Elaborative Novel Extensive Superior
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This resource was written by Carolyn Coil & Dodie Merritt, Solving the Assessment Puzzle, Piece by Piece. www.piecesoflearning.com, 1-800-729-5137.

Last edited by D. Sahijwani & D. Smith on August 20th 2009.

The Three-Story Intellect



General Behaviors Rubric Grades 6-8

<i>General Behaviors Rubric Grades 6-8</i>				
<i>Academic Behaviors</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>
<i>Connects content to theme</i>	Student initiates making general statement/s or product/s which connect content and theme.	Student follows directions on making general statement which connects content and theme.	Student attempts to make connection/s between content and theme.	Student does not attempt to make connection between content and theme.
<i>Applies knowledge and skills</i>	Student exceeds requirements by applying knowledge that demonstrates an expanded understanding.	Student applies knowledge and skills presented.	Student experiences difficulties in approaching standards/requirements.	Student does not demonstrate an ability to apply knowledge and skills.
<i>Takes academic risks/accepts challenges</i>	Student exceeds requirements by going beyond expectations. Initiates connections and extensions to other content areas, personal experiences or current activities. Embraces ambiguity.	Student attempts all activities and assignments consistently with effort. Demonstrates perseverance/persistence. Tolerates ambiguity in the understanding of complex problems and solutions. Makes connections.	Student attempts some activities. Low tolerance of ambiguity; rarely persists when attempting to understand and try complex problems.	Student rarely/does not attempt academic risks. Easily frustrated when faced with complex or ambiguous problems.
<i>Completes assignments</i>	Student completes assignment and extends own learning by elaborating on concepts and applies knowledge in other areas.	Student completes required assignment during time allotted.	Student assignments are incomplete.	Student does not attempt assignments.
<i>Thinking Behaviors</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>
<i>Demonstrates ability to use problem solving strategies</i>	Student applies problem solving strategies independently across multiple disciplines.	Student applies problem solving strategies across multiple disciplines.	Student rarely attempts problem solving strategies.	Student does not attempt problem solving strategies across multiple disciplines.
<i>Considers new and different approaches, to ideas, issues and problems</i>	Student seeks out new and different approaches to ideas, issues and problems with an open-minded attitude.	Student consistently considers new and different approaches to ideas, issues and problems with an open minded attitude.	Student is resistant to considering new and different approaches to ideas, issues and problems.	Student does not consider new and different approaches to ideas, issues and problems.
<i>Contributes new ideas or alternative solutions</i>	Student consistently initiates new ideas and creates alternative solutions.	Student contributes new ideas and alternative solutions within the context of the lesson.	Student experiences difficulty in contributing new ideas and alternative solutions but may do so with teacher assistance.	Student does not attempt to contribute new ideas or alternative solutions.
<i>Analyzes and evaluates information</i>	Student develops own evaluation criteria and/or challenges analysis.	Student demonstrates reasoning when making an evaluation and/or analysis.	Student evaluation and analysis is not reasoned.	Student does not attempt to evaluate and/or analyze information.
<i>Motivating and Social Behaviors</i>	<i>4</i>	<i>3</i>	<i>2</i>	<i>1</i>
<i>Participates in classroom activities with a positive attitude</i>	Student's participation and attitude influences others in a positive way.	Student participates in classroom activities with a positive attitude.	Student experiences difficulties in demonstrating a positive attitude.	Student's attitude in classroom activities negatively impacts other students' learning.
<i>Produces high quality of work</i>	Activities and assignments have been completed and the finished products are beyond expectations in the areas of creativity, and/or the use of critical thinking skills and problem solving.	Activities and assignments have been completed and finished. Products demonstrate some evidence of creativity, critical thinking skills, and problem solving.	Activities and assignments are partially completed or completed without attention to creativity, critical thinking skills, and problem solving.	Student does not attempt to complete activities and assignments.
<i>Cooperates with others</i>	Student willingly encourages and accepts all others in group. Facilitates cooperation within the group.	Student actively listens, shares, and contributes ideas. Accepts others' ideas. Uses appropriate language and attitude toward others. Consistently willing to work with others.	Student has difficulty working with others. Uses negative language and/or attitude toward others.	Student doesn't work in a group, share or accept others' ideas.
<i>Self directed learner</i>	Student exceeds requirements by working independently to expand the learning activities.	Student follows directions and completes learning activities.	Student requires guidance in completing learning activities.	Student does not participate in or attempt the learning activities.

Indicators for Assessing Process Skill Development

These questions examine developmental levels of process-skill development and play several important roles in formative assessment:

- They help focus attention on significant aspects of student behavior
- They serve as guides for interpreting evidence collected
- They point to students' next developmental steps

Use this list as a guide to process-skill development by determining *which questions can be answered by "yes."* Finding where positive answers turn into negative ones (or, more realistically, where it becomes difficult to say yes or no) can locate a student's level of development for the particular process skill. Most importantly, this process also indicates the next developmental step. This pointer to where progress can be made is the whole purpose of formative assessment.

Observing

Do the students

1. Succeed in identifying obvious differences and similarities between objects and materials?
2. Make use of several senses in exploring objects or materials?
3. Identify differences of detail between objects or materials?
4. Identify points of similarity between objects, where differences are more obvious than similarities?
5. Choose to use aids to the senses (such as a hand lens or microscope) for study of details as necessary?
6. Distinguish from many observations those which are relevant to the problem at hand?

Explaining/Hypothesizing

Do the students

1. Attempt to give an explanation consistent with evidence, even if only in terms of the presence of certain features or circumstances?
2. Attempt to explain things in terms of a relevant idea from previous experience, even if they go no further than naming it?
3. Suggest a mechanism for how something is brought about, even if it would be difficult to check?
4. Show awareness that there may be more than one explanation that fits the evidence?
5. Give explanations which suggest how an observed effect or situation is brought about, and which could be checked?
6. Show awareness that all explanations are tentative and never proved beyond doubt?

Predicting

Do the students

1. Attempt to make a prediction relating to a problem, even if it is not derived from the evidence?
2. Make some use of evidence in making a prediction rather than basing it on preconceived ideas?
3. Make reasonable predictions which fit the evidence without necessarily being able to make the justification explicit?
4. Explain how the evidence has been used in making predictions?
5. Justify a prediction based on patterns in information or observations (such as making interpolations or extrapolations)?
6. Justify a prediction in terms of an idea that might explain it?

Indicators for Assessing Process Skill Development

Raising Questions

Do the students

1. Readily ask a variety of questions, including those that can and cannot be investigated?
2. Participate effectively in discussing how their questions can be answered?
3. Recognize a difference between an investigable and a noninvestigable question?
4. Suggest how answers to questions of various kinds can be found?
5. Choose a realistic way of measuring or comparing things to obtain a result?
6. Help in turning their own questions into a form that can be tested?

Planning and Conducting Investigations

Do the students

1. Start with a useful general approach even if details are lacking or need further thought?
2. Have some ideas of the variable that has to be changed or what different things are to be compared?
3. Keep the same the things which should not change for a fair test?
4. Have some idea beforehand of what to look for to obtain a result?
5. Choose a realistic way of measuring or comparing things to obtain a result?
6. Take steps to ensure that the results obtained are as accurate as they can reasonably be?

Predicting

Do the students

1. Discuss what they find in relation to their initial questions?
2. Compare their findings with their earlier predictions?
3. Notice associations between changes in one variable and another?
4. Identify patterns or trends in their observations or measurements?
5. Check any patterns or trends against all the evidence?
6. Draw conclusions which summarize and are consistent with all the evidence?

Communicating

Do the students

1. Talk freely about their activities and the ideas they have, with or without making a written record?
2. Listen to others' ideas and look at their results?
3. Report events in drawings, writings, models, paintings, and so on?
4. Use tables, graphs, and charts to record and report results when these are suggested?
5. Regularly and spontaneously use information from books (or other resources) to check or supplement their investigations?
6. Choose a form for recording or presenting results which is both considered and justified?

Adapted from *Teaching, Learning and Assessing Science 5–12* by Wynne Harlen. Sage, 2000, pages 147–152.